STATEMENT OF BASIS

for

Wolf Lake Terminals
EPA ID NO. IND 054 101 415
Hammond, Indiana

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I INTRODUCTION

This Statement of Basis (SB) for Wolf Lake Terminals(WLT) is being issued by the U.S. Environmental Protection Agency (U.S. EPA) to fulfill part of its public participation responsibilities under the Resource Conservation and Recovery Act (RCRA). The SB explains this proposed remedy for addressing contaminated soil and groundwater at the WLT facility.

In 1994, WLT began a series of investigations and cleanup actions at the site prior to and after entering into a consent order with the U.S. EPA in 2000. Consequently, WLT has already completed some of the remedy U.S. EPA is proposing.

The document summarizes information that can be found in greater detail in the August 2001 Environmental Indicators Report and the December 2002 Interim Measures Lead Soils Cleanup Report and other pertinent documents contained in the Administrative Record for this decision. U.S. EPA encourages the public to review these documents in order to gain a more comprehensive understanding of the facility and the RCRA activities that have been conducted.

U.S. EPA is interested in receiving comments on the adequacy of the proposed remedy even though some important improvements have already been made. For example, some concerned citizens might have valuable information about the site and the facility's history that we are not aware of. The U.S. EPA may modify the proposed remedy or select another remedy based on public comments or new information. Therefore, the public is encouraged to review and comment on the proposed remedy.

II PROPOSED REMEDY

The U.S. EPA is proposing the following remedy to address all contaminated environmental media at WLT Hammond, Indiana facility:

- Excavation, removal and disposal of soils impacted with lead concentrations above the U.S. EPA's risk-based threshold in areas surrounding Tank No. 26 and Tank No. 32 (already completed).

- Placement of institutional controls on the property to restrict the use of the property to commercial and industrial uses.

III FACILITY BACKGROUND

The site is located in the northwestern corner of Lake County at the address of 3200 Sheffield Avenue, Hammond, Indiana 46325. The site is bounded on the north, west and south by vacant land that is infrequently used for recreational purposes and bordered by the surface water bodies that make up the Wolf Lake recreational area. The southeast portion of the facility is bordered by the strategic minerals reserve of the U.S. Department of Defense, Defense Logistics Agency. No residential properties are located adjacent to the WLT site property. The WLT site comprises approximately 34 acres of land. The physical layout of the site is characterized by a single controlled access entry through a gate on the southeast corner. The dominant feature of the entire facility is the tank farm. The tank farm is located over most of the property with 115 tanks of various sizes and configurations located within 14 separate diked areas.

The WLT site has been a bulk storage depot/terminal from its construction to the present. The site was originally reportedly operated as a strategic reserve for whale and vegetable oils. The types of products handled at the site include base oils, white oils, corn syrups, and glycols. Records also show that some of the tanks within the tank farm were used to store used fuel oils and spent

solvents, but WLT no longer treats, stores or disposes of hazardous waste at this facility. At present, WLT is currently complying with an August 3, 1994 Agreed Order with the Indiana Department of Environmental Management (IDEM) for the area in and around Tank Nos. 26 and 32 relating to past activities conducted at the WLT property in Hammond, Indiana, which included two fuel blending operations that blended hazardous waste and fuel oil. The Order essentially required submittal of a closure plan for Tank No. 26 and Tank 32, including removal/disposal of wastes and decontamination of the tank. The Order also required submittal of a Facility Assessment Plan for both tanks to determine the degree and extent of contamination in the soils and potential impacts to groundwater. The Order also required WLT to submit a Remedial Action Plan if volatile organic compounds (VOCs) were present or if total metal concentrations detected on a total constituent basis, were at concentrations above a level equal to three (3) times the standard deviation plus the mean of the background samples].

As a function of the investigative activities conducted under the Agreed Order, WLT submitted a Facility Assessment Report on the investigation conducted at Tank Nos. 26 and 32 to the IDEM in April 1996. The Facility Assessment Report noted the presence of concentrations of three metals and four VOCs in facility soils above the cleanup levels specified in the Order. Soils were determined to have concentrations of lead above background near both Tank Nos. 26 and 32.

IV SUMMARY OF FACILITY RISKS

Other activities at the facility included background soil sampling, installation and sampling of a groundwater monitoring well system, and determination of facility groundwater flow and lithology. The cumulative results of the background soil sampling at the four specific depths across the facility are provided on Table 1. These results indicated that significant concentrations of the parameters of concern, specifically chromium and lead, are ubiquitous to the facility.

Tables 2 and 3 provide the soil concentration data for the parameters of concern relative to the tiers of sampling conducted at each of Tank Nos. 26 and 32. These tables also denote, as shaded areas, those concentrations which were observed to exceed the respective background criteria. In general, some soils at each tank area were observed with exceedances above background. More specifically, Tank No. 26 had surficial exceedances of arsenic, chromium, lead, toluene, trichloroethene, and tetrachloroethene. Tank 32 had above-background exceedances of only lead and acetone. Most notable of the exceedances were the lead concentrations on the northeast side of Tank 26 at 16,300 mg/kg and the 2,320 mg/kg of lead on the southwest side of Tank 32.

In June 2000, WLT entered into an Administrative Order on Consent with the U.S. EPA. The Administrative Order required WLT to (a) identify and define the nature and extent of release of hazardous waste and hazardous constituents from all Solid Waste Management Units (SWMUs), Hazardous Waste Management Units and Areas of Concern at the Facility; (b) demonstrate through submitting an Environmental Indicators (EI) Report on or before September 1, 2001, that all current human exposures to contamination at the facility are under control, and that migration of contaminated groundwater at or from the facility is stabilized and (c) on or before December 31, 2002, propose final corrective measures necessary to protect human health and the environment from all current and future unacceptable risks due to releases of hazardous waste or hazardous constituents at or from the Facility.

V SCOPE OF PROPOSED CORRECTIVE ACTION

The goals of the proposed remedy are to eliminate significant exposures that pose threats to human health and the environment, to clean up contaminated soils to levels consistent with current land use, and to restore ground water to its maximum beneficial use and eliminate risks to human health by meeting the applicable health-based ground water

protection standards. The proposed remedy is based on the assumption that future use of the facility will be industrial/commercial and consistent with the current property use. The decision factors used to support the proposed remedy are as follows:

1) WLT has already removed lead contaminated soils near the northeast side of Tank No. 26 and disposed them at an offsite facility during corrective action activities conducted in September 1999.

2) The concentrations of trichloroethene, tetrachloroethene, arsenic, chromium, and toluene detected were less than the values for the U.S. EPA Region 9 Preliminary Remediation Goals (PRGs) and the Indiana Voluntary Remediation Program (VRP) Tier II standards for the non-residential use scenario for surface or subsurface soils (see Table 4).

However, the detected concentrations of lead in the surficial soils near the southwest side of Tank No. 32 and the northwest side of Tank No. 26 were above the U.S. EPA Region 9 PRGs and the Indiana VRP Tier II standards for the non-residential use scenario for surface or subsurface soils. The risk based threshold for lead in soils is 750 mg/kg.

The initial investigation results indicated that the worst case concentrations of lead in the soils were observed to be near the northeast side of Tank No. 26 at a concentration of 16,300 mg/kg of lead. Contaminated soils with high TCLP concentrations of lead were later excavated and disposed offsite. The remaining worst case area of lead impacted soils at Tank No. 32 was located immediately near the base of the tank and was detected at a concentration of 2,320 mg/kg. The northwest side of Tank 26 also exceeded the lead soils goal as the concentration of lead immediately near the tank was detected at 1,970 mg/kg.

Based on the comparison of the risk based thresholds and parameter concentrations, only lead remained as a parameter of concern for the Tank areas. The concentrations of all of the other parameters of concern fell well below the respective risk based thresholds. WLT then removed the contaminated soils which contained lead concentrations above 750 mg/kg and disposed of them off-site.

3) Sampling of the groundwater at the facility was conducted at locations near each of Tank Nos. 26 and 32 and at the facility perimeter in both the shallow and deep portions of the aquifer. Tables 4 and 5 present the detected constituent data obtained from analyses of the groundwater from the monitoring well samples and the deep aquifer (hydropunch) samples, collected during the implementation of the IDEM approved Supplementary Sampling and Analysis Plan respectively.

Only one sample location had a detected constituent that was observed with a concentration exceeding a U.S. EPA Maximum Contaminant Level (MCL) for drinking water. Deep aquifer sample B6-DH, collected on July 27, 1997, had tetrachloroethene detected at 0.034 mg/l. The MCL for tetrachcloroethene is 0.005 mg/l. This sampling point is located upgradient of perimeter monitoring well MW-2 on the southwest side of Tank No. 26. Neither the deep aquifer groundwater sample nor the monitoring well groundwater sample at the downgradient perimeter MW-2 location had tetrachloroethene detected. No other detected constituents had concentrations exceeding a drinking water MCL. No other groundwater impacts were detected in the shallow nor in the deep aquifer samples at the tank areas.

The monitoring wells were sampled on May 16, 2000 in order to update the groundwater flow and to confirm earlier detected tetrachloroethene and any other constituents that may be present

in the groundwater in the respective monitoring wells.

Samples of the groundwater were collected and analyzed for those constituents that had previously been detected in either the previous monitoring well samples or the deep hydropunch samples for the respective areas. Additional groundwater samples were collected on July 2, 2001 to obtain samples for analysis of total (unfiltered) concentrations of metals in facility groundwater. Table 6 presents a comparison of the worst case concentrations of constituents detected in groundwater during the Supplementary Sampling and Analysis Program implementation in each area versus the analytical result for that constituent from the updated sampling events (May 2000 and July 2001).

These groundwater concentrations are also compared against the respective MCL, when an MCL is available. No concentrations from the update sampling were observed above the historical values. In most occurrences, the constituent was not detected in the update sample.

4) U.S. EPA determined from the Environmental Indicator (EI) report submitted to U.S. EPA in August 2001 that current human exposures and migration of contaminated groundwater at the facility were under control at that time.

VI SUMMARY OF CORRECTIVE MEASURES ALTERNATIVES

A Removal and Off-site Disposal of Contaminated Soils Exhibiting a Hazardous Waste characteristic (already completed)

Between September and October 1999, WLT voluntarily excavated and removed for offsite disposal portions of soils confirmed through analysis to exhibit the hazardous waste characteristic of toxicity for lead. A second excavation and removal effort was conducted followed by confirmatory sampling of the remediated area. Analytical results of soils within

the excavation areas further showed that toluene, trichloroethene, and terachloroethene are no longer present in the this zone. The only unexcavated contaminant of concern left within the Tank areas was lead.

B Removal and Off-site Disposal of Additional Contaminated Soils that Posed Unacceptable Risks (already completed)

WLT conducted delineation sampling of the impacted soil areas around Tank no. 26 and Tank no.32.

Beginning April 16 through July 18, 2002, WLT removed approximately 126 tons of lead soils and disposed of them offsite. Sampling and analyses of the facility soils conducted during delineation and after excavation for confirmation determined that the removal efforts at each tank were successful.

Figure 4 presents the locations and concentrations of the delineation sampling as well as the areas with lead concentrations exceeding the 750 mg/kg threshold which were then slated for excavation and disposal. Table 6 presents the tabulated results of the delineation sampling. As noted on Figure 4, the sample locations for each tank are noted in the boxes with the lead concentration information noted along side the location box with the upper sample result listed on top and the lower sample result presented on the bottom. The results for Tank No. 26 indicate that a high concentration of 2,960 mg/kg of lead in the soil was observed at the Tank No. 26-14 location on the southeast perimeter of the facility. Appendix B presents photo-documentation of the lead impacted soil removal activities near Tank Nos. 26 and 32.

C Groundwater Investigation (already completed)

Analysis of groundwater from both shallow and deep monitoring wells at the WLT facility in 1997 detected the presence of only one constituent tetrachloroethene at (0.034 mg/l) above the MCL

(0.005 mg/l). On May 16, 2000, in order to update the groundwater flow information and to confirm earlier detected constituents and any other constituents of concern, samples of the groundwater were collected and analyzed for those constituents detected in the monitoring well. Additional groundwater samples were collected on July 2, 2001 to obtain samples for analysis of total (unfiltered) concentrations of metals in facility groundwater. No constituents of concern (lead, arsenic tetrachloroethene) from the update sampling were observed above the MCLs. In most occurrences, the constituent was not detected in the update sample.

D Institutional Controls (proposed)

Under this proposed corrective measure, WLT would have to restrict the current and future use of its property to commercial and industrial land uses. WLT would place a notice in the deed to inform future property owners and lessees of the location of contaminants at the facility. If WLT should decide to sell the property, the future owners would either agree to continue restricting the use of the property to industrial or commercial land uses, or they could conduct additional cleanup of contaminated soils, such that the land use restriction would no longer be needed.

COST ANALYSIS

The estimated costs for the implemented corrective measures at the WLT facility are outlined below

Consulting fees	$126,460
Analytical costs for soil & groundwater.....	$26,250
Field Equipment, copies, etc.....	$4,900

Drilling costs.....	$7,430
Excavation costs.....	$6,290
Transportation/disposal.....	$15,170
Total	$344,110

EVALUATION OF THE PROPOSED CORRECTIVE MEASURES

The proposed corrective measures for cleaning up contaminated media at the Wolf Lake Terminals facility include excavation and removal of all contaminated soils and off-site disposal (already completed), groundwater performance monitoring, and maintenance of institutional controls. These corrective measures are proposed for the following reasons: (1) the facility does not pose acute risks to humans and other ecological receptors; (2) the sources of lead contamination in the soils have been removed by excavation and disposal; (3) no soils with concentrations above the risk based threshold remain at the facility; consequently, the potential human health exposure scenario has been substantially reduced; (4) although the facility is no longer operating as a treatment, storage or disposal facility, it generates small quantities of hazardous wastes; (5) the community and the neighboring communities do not use the groundwater as a drinking water source since drinking water supplies are already provided by the local governments in the area; (6) U.S. EPA encourages facility owners to redevelop and reuse land that has been impacted and (6) the remedy does not require any frequent or complex operation and maintenance.

The following discussion profiles the performance of the proposed remedy against our four general standards and our five remedy decision factors.

1. **Protection of Human Health and the Environment**.
   The overall protection of the environment is addressed most effectively at the WLT facility by excavation and removal of contaminated soil and institutional controls to prevent inappropriate use of the property in the future. The excavation and removal of the impacted soils eliminates the available source of lead that could migrate into the underlying aquifer, and also effectively prevents direct contact with contaminated soils. It appears that compliance with applicable ground water protection standards has already been achieved at the WLT facility. The performance monitoring of the groundwater will provide assurance that the groundwater protection standards will be achieved consistently.

   The proposed remedy provides the greatest improvement to the environment over the shortest period of time. Adverse effects from the implementation of the remedy will be minimal.

2. **Attainment of Media Cleanup Standards**. The soils that exceeded the appropriate soil cleanup levels for industrial land use have already been removed. Performance monitoring is needed to confirm that the groundwater cleanup goals are achieved consistently.

3. **Controlling the Sources of the Releases**. Hazardous waste is no longer managed in the tanks as a result of the closure plan executed under the Agreed Order, and the contaminated soils that were a source of groundwater contamination have been removed already.

4. **Compliance with Waste Management Standards.** WLT's records indicate that the highly contaminated soils were managed in accordance

with the applicable regulations after they were removed.

5. **Long-term Effectiveness**. Removal of the highly contaminated soils ensures that they cannot be a future source of groundwater contamination or pose an unacceptable risk to on-site workers in the future. The institutional control restricting the use of the property to industrial or commercial land uses is needed to ensure that there will not be any unexpected exposures to the remaining contaminated soils in the future. The proposed remedy has a minimal risk of failure.

6. **Toxicity, Mobility and Volume Reduction.** The soils that contained the most toxic and mobile hazardous constituents have already been removed and shipped off-site for management in secure landfills.

7. **Short-term effectiveness**. Most of the proposed remedy has already been implemented. There are no unacceptable short-term risks.

8. **Implementability**. Most of the proposed remedy has already been implemented. Performance monitoring and institutional controls are routine activities that are not difficult to implement.

9. **Cost**. Most of the costs have already been expended. The costs of the performance monitoring and institutional controls are minimal.

In summary, the proposed soil removal has already been implemented. Confirmatory sampling after excavation of lead contaminated soils at each source location were successful. No soils with concentrations above the risk based levels remain on facility. Consequently, the risk to human health and the environment in industrial land use from soils has been eliminated. Institutional controls

will prevent inappropriate use of the property in the future.

PUBLIC PARTICIPATION

U.S. EPA solicits input from the community on the adequacy of the proposed corrective measures. The public is also welcome to provide comments on any alternative corrective measures not described in this Statement of Basis. U.S. EPA has set a public comment period from **August 21, 2003 to October 6, 2003** to encourage public participation in the selection process.

The Administrative Record for the Wolf Lake Terminals statement of basis is available at the following locations:

Hammond Public Library
564 State Street
Hammond, Indiana 46320

U.S. EPA, Region 5
Waste Management Division Records Center
77 West Jackson Boulevard, 7th Floor
Chicago, Illinois 60604
(312) 353-5821
Hours: Mon-Fri, 8:30 a.m. - 5:00 p.m.

After consideration of the comments received, U.S. EPA make a final remedy selection decision. If substantial comments are received, comments will be summarized and responses will be provided in the Response to Comments (RTC) document. The RTC will be drafted at the conclusion of the public comment period and will be incorporated into the Administrative Record.

Written comments should be sent to:
Jonathan Adenuga
U.S. Environmental Protection Agency
77 West Jackson Boulevard, DRE-9J
Chicago, Illinois 60604

or by e-mail adenuga.jonathan@epa.gov